



Alaska Reflections

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Fish Culture Science Camp

Fueled by regular snacks of whitefish eggs, 100 Selawik students learned about traditional fishing practices and modern ecological/biological research in an innovative educational adventure.

BY LISA FOX

For five days last September, the U.S. Fish & Wildlife Service, the NANA Regional Corporation, the Northwest Arctic Borough School District, and the Native Village of Selawik worked together to offer a Fish Culture/Science Camp to Selawik students. The camp was a tremendous success and everyone (including the participating teachers and biologists) had a terrific time.



USFWS PHOTO

Selawik student Trish Henry prepares to try her hand at traditional fish-cutting techniques.

Thanks largely to the efforts of Hanna Loon (NANA), Clyde Ramoth (Refuge Information Technician, Selawik NWR), Louis Skin (Selawik School, bilingual teacher), and Randy Brown (fisheries biologist, USFWS) the students enjoyed a productive week of outdoor activities related to Selawik area fisheries resources. The purposes of the Camp were two-fold: First, it would allow the students to participate in traditional fishing activities on the Selawik River and to become familiar with the tools and techniques that have been used to harvest this food source for generations. Second, they would learn about a current Service research project investigating whitefish ecology and biology, and discover the basic principles of fisheries management.

Under the direction of Louis and Clyde,

the students set up a fish camp on Emma Ramoth's generously-donated allotment near the native village of Selawik. After erecting a frame for the canvas wall tent and building a drying rack, the camp was ready to go! All week long, the students enthusiastically assisted Randy, Clyde, and Hanna in setting and checking nets. Approximately 100 young people visited the camp, arriving 10-20 at a time. The students were shuttled to and from Selawik Village in small groups in order to make sure that all would be able to have the opportunity to get real hands-on experience. The safe transportation of students to and from the camp was provided with assistance from the Selawik Village Tribal Council (Selawik IRA). Each class learned about traditional

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Reflecting

THE WINTER OF THIS CONTENT?

When I was a child, saying goodbye to summer was a positively heartrending experience. Another school year loomed, and only the distant whispered promise of Christmas saved me from total despair. As the years pass, however, I've found myself facing the end of the long, bright days with just a bit more ambivalence.

For one thing, though summer is undoubtedly beautiful, she is, especially here in Alaska, a very demanding companion. One simply does not relax his or her way through a northern summer. To do so is to constantly be reminded of, and expected to bemoan, opportunities squandered. From the first clam tides of April, through hooligan dipping, the whipsaw demands of a confusion of sometimes conflicting early and late salmon runs, to hunting season and lowbush cranberries sweetened by the kiss of the first frost, every available weekend screams to be filled with something being caught or collected. Adding to this ever-present pressure are the constantly-dwindling opportunities for summer hiking, boating, camping, bicycling, and all the other outdoor activities that fill our garages with gear and our winters with daydreams.

The same can be said of our work life. Alaskans in any occupation tend to shun even appealing opportunities for professional travel from May through September. And those of us in the Service, whose time is often more firmly tied to the ebb and flow of migrating species than that of the most fanatic of salmon anglers, recognize that a bird count not done, a caribou study not completed, may well, even if only missed by a day or two, be a chance lost for the year.

Nowadays, when the first snows fall and the last coho loses its brightness, I sometimes feel like I've just stumbled across a finish line. And, as I pause there, panting psychologically if not physically, I don't look back at fish not caught or rivers not floated or

hikes not taken, but ahead to months that answer to a slower

clock. I look past the brief blink of autumn to winter, a season which is above all else rich in time.

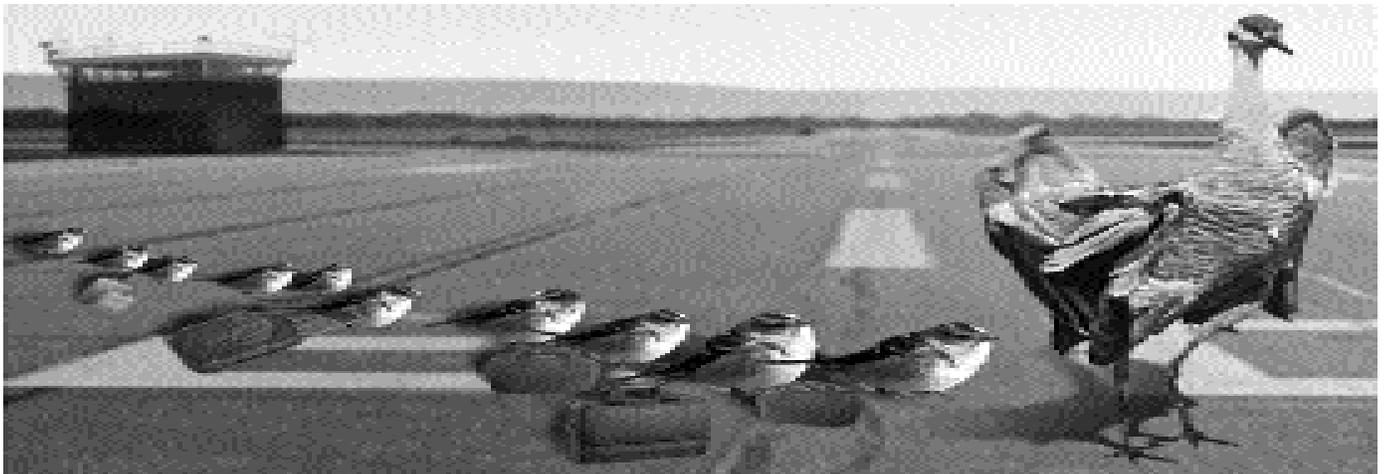
The cold months ahead have their own charms, of course; their own catalog of activities to enjoy. For the most part, though, winter is far more generous in framing its opportunities. If you decide to play couch potato and miss a weekend of cross-country skiing, for example, during most years you will have months-full of other opportunities to hit those trails. The same can be said for winter camping, snowmachining, ice fishing and most other cold-weather recreational treats.

This issue of Reflections, regardless of the fact that it was conceived during the bleeding daylight days of late autumn, is clearly a winter issue, a chance to look back upon the work and achievements of the months behind us. I hope the issue's hibernal creations entertain each of you, and perhaps inspire you to take the time to reflect in wintry leisure upon your own accomplishments of the season passed.

I trust that you will, because the long, dark days ahead will offer adequate time for this, as they will for even for the most grueling of winter activities. Who among us, after all, hasn't been cheerfully spendthrift with February hours, throwing them away in great, reckless handfuls as we plan, to the flayed minute, how to avoid the mistakes of the past year and wring every last second of desperate pleasure from the summer to come?

Bruce Woods
Public Affairs Specialist
Anchorage, Alaska

FISH SHTICKS by Ron Laubenstein & Bruce Woods



Spring may seem a long way away right now, but before you know it, as the Elders teach, the songbirds will be arriving on the backs of cranes . . .

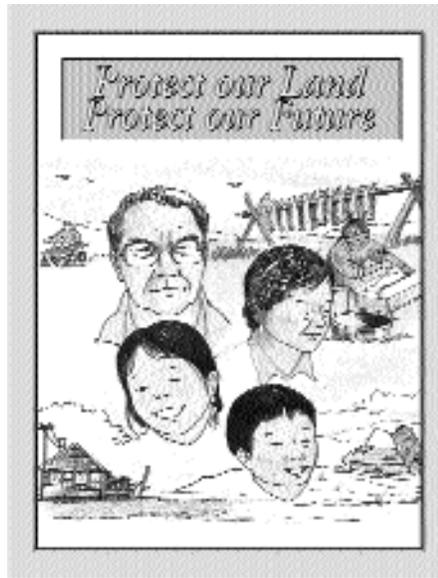
Protect Our Land, Protect Our Future

This innovative outreach program uses a multi-media approach to encourage responsible off-road vehicle use.

By DONNA HANLEY

Three new outreach products developed by Yukon Delta National Wildlife Refuge staff work together to carry the message, "Protect the Land, Protect the Future." The first component is a comic book that discusses the impacts that off-road vehicles can have on the tundra. The book is the result of a Challenge Cost Share Agreement with Audubon of Alaska. It features two grandparents who tell their grandchildren what the tundra was like in the past, and explain how parts of it have changed today. The story begins with a question posed by the children, "We had to walk for a long time to find good berries. Did people have to travel far to find berries (in the old days)?"

To answer them, the grandparents take the children for a walk on the tundra, showing them how off-road vehicles, when used without respect for the land, can damage plants and threaten wildlife. During their walk, the youngsters see how reckless ORV use on tundra trails has injured and even killed berry plants. They see, as well, that these vehicles can threaten wildlife when passing too close to nesting birds and harm fish by eroding stream banks. The story's message is made more powerful by Hooper Bay Artist George Smart's illustrations. Smart realistically portrays the local lifestyle



and shows how respecting the tundra can "Protect the Land and Protect the Future." You can obtain copies of the publication by contacting the Yukon Delta refuge at 907-543-3151.

The second part of the refuge's protect-the-tundra outreach project is a laminated, full-color 11" X 17" poster. It carries the same theme and was created by the same artist who illustrated the comic book, the poster also serves as the book's back cover. The full-sized poster is printed on both sides; one with English text and the other in Yup'ik.

Finally, the outreach plan includes a song entitled *Tundra Blues*, written by Refuge Biologist Brian McCaffery. The song was recorded at KYUK public radio station of Bethel in October, featuring local singer and guitarist Allison Broerman. The refuge plans to send out the comic book and poster to area schools and villages, and to have the song playing on the radio within the same time frame. Stay tuned!

Donna Hanley is an Education Specialist at Yukon Delta National Wildlife Refuge.



Hooper Bay artist George Smart's illustrations help bring Yukon Delta's outreach message to life.

Culture Camp!

The Shriijaa Khalii River Traditional Knowledge Gathering near Arctic Village, Alaska taught valuable lessons and left local youth with lingering memories and a hunger for more.

BY JOANNE GUSTAFSON

Arctic National Wildlife Refuge and Arctic Village residents have been working together on various projects for many years. Both of these long-time partners face the challenges of working to minimize the negative impacts of human activities on the resources of one of America's last frontiers.

Three years ago, when Arctic Refuge staff and residents of Arctic Village gathered at Old John Lake (*Van Choh Vee*), about 20 miles east of the village, that special relationship blossomed. Old John Lake has been an important fishing site for Arctic Village people for thousands of years, and still serves that purpose to this day. The lake is also a study site for the U.S. Fish and Wildlife Service's on-going fisheries research. At the end of a particularly intensive research season, a gathering was organized to thank the local people for helping support the research projects being conducted by Arctic Refuge and Fisheries staff. That first celebration was so successful that it has evolved into an annual event. Every fall a traditional site is chosen in a different remote setting near Arctic Village and a traditional knowledge gathering and potlatch is held.

During the event, Elders teach the youth why the chosen location is important for subsistence use, and instruct them in the ways of the Gwich'in Indian traditional culture. This education is supported by information concerning the things that western science tells us about the land and its resources. Elders and special guest speakers teach the youth a mixture of survival skills and science, including fish biology; wilderness travel preparation and gear choice; duck and porcupine dressing; animal trapping; edible and medicinal plant use; and hunting practices. In addition, they tell traditional stories, identify histori-



Allen Tritt demonstrates a traditional method of cooking duck over an open fire.

cal sites, and lead the youth in visits to Native allotments.

Last year, the gathering was held at *K'äizhuuzhitgwitsik*—or First Tower—about twenty miles north of Arctic Village. This year it took place at Shriijaa Khalii River. As word about the event has spread to nearby villages, there has been increased interest and involvement from other areas. This year, participation on the part of both young people and Elders was outstanding, especially so because representatives came from many different villages across Alaska. It was a valuable opportunity to observe and compare the traditional knowledge and skills of different Tribes.

On July 31, with the rainy fall season making an all-too characteristic beginning, Craig Fleener and I flew to Arctic Village and arrived at about noon, just in time for lunch. After enjoying a hot meal on what promised to be a cold and gloomy afternoon, we held a mapping session at the community hall. Craig, a biology instructor, showed the local youth how to design and label a map indicating areas of traditional and subsistence use. He also gave a presentation on a caribou species curriculum, for which the participating students can earn college credit.

The following day, with the sun beaming through the clouds and a warm, gentle

wind blowing, a large group of us gathered in boats to travel to Shriijaa Khalii for the beginning of the traditional knowledge gathering. About fifty Elders, adults and young people took part in the event. The instructors did an excellent job teaching and demonstrating their knowledge and skills, and participation was outstanding. It was very impressive and inspiring to observe these Elders, who have a wealth of knowledge and expertise, passing this valuable traditional wisdom on to the younger generation. Almost everything that was taught at the camp involved hands-on demonstrations using locally-gathered natural resources.

At the beginning of the gathering, Trimble Gilbert, a priest and respected Elder, blessed those assembled and discussed the history and use of fishing gear. Trimble discussed the history of Shriijaa Khalii and how it got its name. It means "he pulls out grayling (on hook)." Then Trimble put a fish trap (made out of willow) in the creek called "Shriijaa Khalii Creek" and demonstrated how fish are caught in the trap, as well as how to remove fish and store them.

Kias Peter taught a session on animal trapping, and did an excellent job demonstrating the setting of a trap for wolves and

UFSWS PHOTO

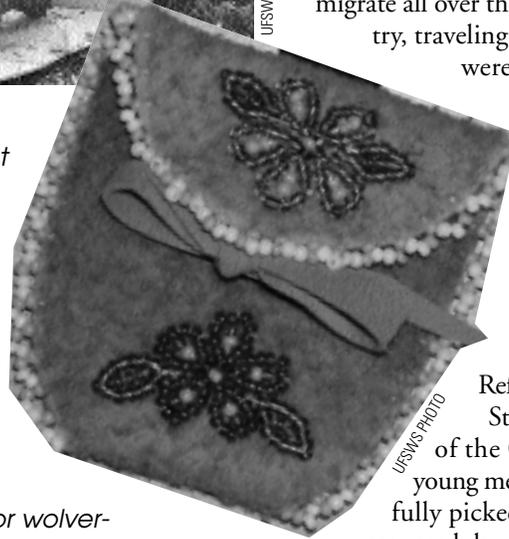


UFSWS PHOTO



UFSWS PHOTO

John Christian (above) taught students how to safely remove the quills from a porcupine before cooking it. Kias Peter (left) built this dead-fall trap designed to catch wolves or wolverine. A group of talented beadworkers taught various methods of sewing beads onto a leather pouch (right).



UFSWS PHOTO

wolverine. He chopped down a spruce tree and cut it into logs to build the trap, which he then set. Everything was accurately made by hand. Kias also taught some general survival skills. Soon after, Allen Tritt demonstrated how to set rabbit snares and had each of his young students make and set his or her own snare. In addition, he demonstrated a traditional method of dressing a black duck in order to slap it out on a willow stick to cook over an open fire. The duck was delicious.

Later, Maggie Roberts taught plant medicine and use. She showed her “students” which native plants to eat and which to avoid, and identified materials with medicinal use, including specific roots, pitch, spruce, and Hudson Bay tea. She also demonstrated how to prepare and cook a black duck on a stick over an open fire. Her methods were different from Allen’s. It was interesting to see two regionally-accepted

ways of accomplishing the same task.

Albert James, with assistance from Albert Gilbert, demonstrated how to set a martin and fox trap made out of small spruce trees. He also taught how to build a temporary shelter out of a spruce tree and branches. The shelter looked very cozy and useful as protection from harsh weather. John Christian was able to club a porcupine, and helped the youngsters remove the quills and then singe, cut, and cook the animal. His tips for handling porcupines without getting injured were especially informative. Everybody had a taste of the meat and enjoyed it.

During the evenings, a group of ladies who are talented beadworkers—including Doris Ward, Josephine Peter, Florence Newman, Maggie Roberts, Annie Christian and Mary Gilbert—taught the girls the

various methods of sewing beads onto a skin medicine pouch. Doris also discussed survival skills, describing what to pack and carry when traveling on small airplanes. She talked about her own experiences in dangerous situations, and described how she had been able to survive these ordeals with the help of a few simple survival items such as tea, matches, knives, fish hooks and rabbit snares.

On the last day of the gathering we were scheduled to hike to Kiiivitanlii Mountain. The purpose of the trip was to show the youth that our ancestors used to migrate all over the Brooks Range country, traveling after the animals that were key to their survival.

About thirty-three young people and adults climbed the Kiiivitanlii Mountain, which is about eight miles from the village and located within the Arctic National Wildlife Refuge.

Starting from the banks of the Chandalar River, the young men and women respectfully picked walking sticks from scattered dry wood and the journey began. The first ones to reach the top spotted two Dall sheep rams and got really excited. (Of course, their excitement quickly scared off the sheep.) Eventually everybody reached the top of the mountain and signed their initials on a pole, signifying that they had made it. This was a major accomplishment. At the peak, there was a rapid change in weather from hail, to rain, to snow. In spite of this, the excursion was an event that all will remember and treasure; an exciting (and very tiring) day.

This year’s traditional knowledge gathering has ended, but it has already sown the seeds for next year’s adventure. As the cold months slog on, many a youngster will entertain his or her peers with tales of learning new skills, making friends, and sharing adventures at the gathering at Shriijaa Khalii River.

Joanne Gustafson was born in Arctic Village and is currently a Park Ranger at Arctic National Wildlife Refuge.

Region 7 Takes the Prize(s)!

By CATHY REZABECK

We've all long known that Alaska is home to some of the Service's most talented and dedicated public servants, but it's refreshing to see how many of our own have been so recognized over the last year. Given the fact that news of such awards can often be lost in the rush of the workday, *Reflections* would like to take this opportunity to spread the word about our recently honored Regional celebrities to one and all.

On October 16, Supervisory General Engineer **John Harris** was selected as the Fish and Wildlife Service 2004 Engineer of the Year. In announcing the award, Acting Director Marshall Jones noted that John's "expertise and dedication continue to play a major role in development and rehabilitation of the infrastructure necessary to support the Service's mission in Alaska."

Magnificent 7 (region)

The goal of this ongoing feature is to celebrate the uniqueness of Alaska. Each installment of "Magnificent Seven" will take a look at a person, place, critter or thing that reflects the wonderfulness of the state in which we're all lucky enough to be working. In this issue, we celebrate a selection of Regional staffers who have earned special recognition in 2003.

On April 23, Review Appraiser **Rick Johnson** was named this year's winner of the Division of Realty's Rudolph Dief-f e n b a c h Award, recognizing "significant contributions to the systems, operations, or mission of the Division of Realty."

T e t l i n National Wildlife Refuge Environmental Education



UFSWS PHOTO

Our own John Harris, 2004's Fish and Wildlife Service Engineer of the Year!

Trainer **Mary Timm** was recently selected as 2003's winner of the annual National Sense of Wonder Award for outreach excellence! (See page 8 for an interview with Mary.)

Coastal America, the umbrella organization of federal agencies involved in coastal conservation, presents its Spirit Awards annually. In 2003, Region 7's Coastal Program was one of 7 award winners nationwide. **John DeLapp** (Supervisory Fish and Wildlife Biologist, Anchorage Fish and Wildlife Field Office), **Neil Stichert** (Habitat Restoration Branch Chief, Juneau Fish and Wildlife Field Office) and **Mike Roy** (Partners/Coastal Program Coordinator) were our regions Spirit Award winners. **Mike** also received a Meritorious Service Award in 2003 in recognition of his many contributions to the conservation of Alaska's fish and wildlife.

At the National Fisheries Leadership Conference held in Washington, D.C. earlier this year, Director Steve Williams presented Kenai Fish and Wildlife Field Office Project Leader **Gary Sonnevil**



UFSWS PHOTO

Rowan Gould opens the Regional Office's celebration of Employee Appreciation Day.



UFSWS PHOTO

The Regional Directorate Team waffled all morning long.



John DeLapp (center) and Great Land Trust's Lisa Eyler shared a Coastal America Spirit Award.

and Regional Office Supervisory Fisheries Biologist **Steve Klosiewski** with Fisheries Leadership Awards for their accomplishments in conserving America's Fisheries.

Elaine Mayer, of the Fairbanks Fish and Wildlife Field Office, received the



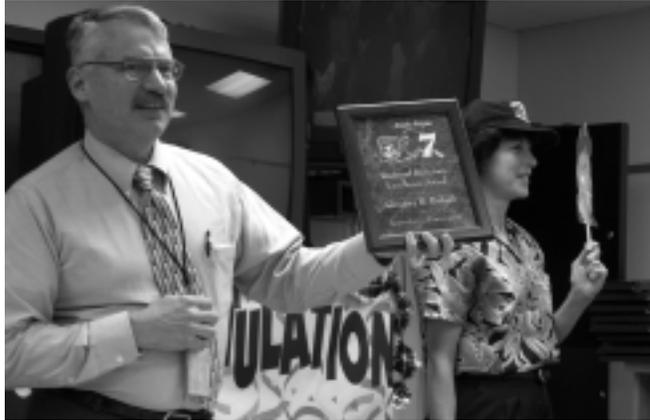
UFSWS PHOTO

Rick Johnson (right), 2003's winner of the Division of Realty's Rudolph Dieffenbach Award.



UFSWS PHOTO

Steve Talbot, winner of the Regional Director's Honor Award for Collaboration in Science.



UFSWS PHOTO

Ann Rappoport, decked out in a Greg Balogh mask and aloha shirt, accepts the Innovation in Conservation Award for Greg.

Wildlife Refuge Association's Refuge Manager of the Year.

A double winner, **Lecita Monzon**, Administrative Technician at Kodiak National Wildlife Refuge, was awarded both a Regional Director's Customer Service Award and the Director's Customer Service Award for 2003, in recognition of the exceptional service she has provided to permit holders, hunting guides, users of refuge cabins, and guests of the refuge visitors' center.

Jimmy Fox, Assistant Refuge Manager at Yukon Flats National Wildlife Refuge, earned the Director's 2003 Individual Environmental Leadership Award for Environmental Management Systems, the only individual award presented to a Service employee this year.

Wells Stephenson, recently retired Marine Mammals Management Supervisory Biologist, earned a Superior Service Award in recognition of his leadership, support of staff, and effective work with partners, all encouraging a greater understanding of, and support for, the Service's management of Alaska's marine mammals.

Fisheries/Ecological Services Supervisor **Richard Hannan** was presented with a Meritorious Service Award

in recognition of his professionalism and leadership in setting high standards of excellence in administering the Endangered Species Act in Region 7.

In addition to these current Alaska employees, two of our most distinguished alumnae recently received the recognition they'd long deserved, in the form of Meritorious Service Awards. This honor is in recognition of individuals "who have made exceptional continuing contribution(s) to Department or Service mission accomplishment." So a big "congratulations," and a bigger "you had it coming," go out from Region 7 to former RD **Dave Allen** and former Deputy RD **Robyn Thorson**.

Of course, we take care of our own here in Alaska, as well. And in mid-November we did so in a big way in the form of the annual Alaska Regional Director's Honor Awards. Some 93 employees were nominated in 6 categories (Customer Service, Innovation in Conservation, Fostering Partnerships, Management Excellence, Workplace Improvement, and Collaboration in Science), and, as Regional Director Rowan Gould noted in his announcement of the nominees, "each of those nominations represents a high honor in and of itself." The nominees are, as Rowan went on to say, "stand-outs in an outstanding regional staff." And, as difficult as it must have been for those doing the initial nominating to select these 93 out of our Region's richness of superb public servants, imagine how much harder it must have been to narrow them down to a handful of winners. The final selections appear to the left, but each and every one of them know they are representatives of all of the men and women in Alaska's Fish and Wildlife Service who work day in and day out, often without the recognition that they so richly deserve, to uphold the public trust in managing the "critters and dirt" that the people of America have put in our charge. Congratulations to all of you!

Cathy Rezabeck is the Service's Alaska Regional Outreach Coordinator.

2003 Community Service Award from the Alaska Association of Conservation Districts for her "tireless and continuing work" to restore fish habitat and passage in the Chena Slough watershed.

Region 7's recently retired Regional Aviation Coordinator, **John Sarvis** earned a Meritorious Service Award for his many contributions to the promotion of aviation safely over the course of his Service career.

It's especially fitting that, in the Centennial year, **Mike Rearden**, manager of Yukon Delta National Wildlife Refuge, was named the National

2003 ALASKA REGIONAL DIRECTOR'S HONOR AWARD WINNERS

CUSTOMER SERVICE
Gary Goldberg, CGS

INNOVATION IN CONSERVATION
Greg Balogh, FES

FOSTERING PARTNERSHIPS
Jill Burchell, LE
Philip Martin, FES

MANAGEMENT EXCELLENCE
Ted Heuer, RF (Yukon Flats NWR)

WORKPLACE IMPROVEMENT
Davis Bales, ENG
Chuck Young, EA

COLLABORATION IN SCIENCE
Steve Talbot, NWR

Mary Timm Wins National Sense of Wonder Award for 2003

BY CANDACE WARD

“And the winner of the Sense of Wonder Award is Mary Timm, of Tetlin National Wildlife Refuge!”

It was clearly a surprised Mary that approached the podium to the applause and whoops of support from her colleagues at the recent National Association for Interpretation Awards ceremony. Mary gave a short, heartfelt acceptance speech, emphasizing how unexpected the award was to her and how the connection of the award to Rachel Carson made it especially meaningful to her. While she spoke, I glanced at Mary’s daughter, Molly, who had an ear-splitting grin on her face and was clearly very proud of and happy for her mother.

While Mary might have been shocked at the honor she received, Molly, and all of us fortunate enough to know Mary, were definitely *not* surprised. She has long been recognized in Alaska as a true leader and innovator in the field of environmental education. Gifted in music and art, she uses song, creative drawing, painting and writing—supported by a keen eye and the tools of scientific inquiry—to get her young audiences excited about nature. Her warm, outgoing personality makes her a special favorite, both in the Tetlin community and among her Alaskan Service colleagues.

I recently had the pleasure of interviewing Mary regarding the Sense of Wonder Award. Here are some highlights of that conversation.

What was your first reaction on learning you had won the Sense of Wonder Award?

I was shocked, actually—it seemed that all of the other finalists were so qualified and had done such impressive things. I was especially happy that Molly was there with me. She was proud of her mom, and that made me feel great!

What led you to a career in environmental education?

I’ve always loved being outside. I was a major tomboy as a kid and roamed over every inch of my folk’s old farm in upstate New York. I received a B.S. in Forestry in Missoula, Montana. I initially worked for the Forest Service but couldn’t find my niche there.

I decided to go back to school, got a teaching degree, moved to Alaska and started teaching. Then I heard that a summer camp leader position had opened up here at Tetlin NWR. The rest is history. That original eight-week temporary job is now a permanent position. We’ve come a long way.

What do you feel are your greatest accomplishments in field of environmental education?

Getting children out into the natural world is what I feel is the



Mary displayed her own "sense of wonder" when it was announced that she'd won the national award!

most important. They need to experience and appreciate it in order to become good stewards. Most of my favorite childhood memories involve the out-of-doors. I want to be able to help young people have the kind of experiences that they'll remember when they're my age!

I'd like to share a true story. A 16 year-old girl, who had just moved to Tok from a big city in "America," was part of my Observing Nature Through Art Camp this past summer. She had never camped out before! Here she was, thrown into a 3-day/2-night primitive camping experience. Her comment to me at the end of the three days: "That's the most fun I've ever had. Thank You." What else can I say?

What are your most successful Environmental Education programs at Tetlin NWR?

Our Art Camps are big hits. We've held six in the past five years. Most children don't receive much in the way of art instruction in school these days, and these camps provide great creative outlets for them.

Our Desper Creek Habitat Camp has always been extremely popular, too. This involves a 3 to 4 day canoe trip on Desper and Scottie Creeks within the refuge. The camp focuses on outdoor skills,

habitat, waterfowl, and the effects of fire on refuge habitats.

Our summer High School Program is another highlight. We alternate the curriculum from year to year between Ornithology and Fire Science. Our high school students go out on the refuge to do "real" work while earning high school science credit. I'm hoping to try a new class in the summer of 2004; something along the lines of environmental literature.

Since you began working at Tetlin NWR in 1992, what changes have you seen in local attitudes and behaviors regarding the refuge as a result of your environmental education work?

I know that there are parents out there who previously either actively disliked the refuge or were at best totally ambivalent about us and our mission. Many of these people now consider us as the good guys. It's hard to think poorly of an agency when your kids run up to the "wildlife lady" and hug her when they see her at the grocery store.

Fire is still a scary thing to the folks in this area, but we've really begun to change attitudes on that score, as well.

And I've heard numerous young boys tell their buddies (after holding a bird at our banding station) that they probably won't shoot at birds anymore with their BB guns.

When the dust settles, what do you like to do for fun?

Music is one of my loves. I play the piano, flute, violin, guitar and numerous folk instruments. I also sing and serve as the director of our Tok Community Choir. I give piano and flute lessons in my "spare" time.

And, as anyone who has ever met me will tell you, I also love to cook (and to eat what I've created.)

My husband and I are owners of the instruction/guide business "Canoe Alaska," and we spend most of our summer weekends (and our annual leave days) leading trips, teaching classes or simply paddling for fun. We've explored lots of eastern interior Alaska by water. Since we're both on permanent part-time appointments, we usually take our 2 months off in the winter, head to the southwest, and paddle the rivers and hike the canyons.



USFWS PHOTO

Young people lucky enough to work with Mary agree that she's the "cat's meow!"

Tell me a little about the role that family plays in your life.

There's no way I could have done this job effectively without my family. My husband, Hank, Biological Technician at Tetlin Refuge, gives me a wealth of help and support. Both of my boys have assisted me over the years with environmental education camps too. Experienced bush rats, they're comfortable, competent and great helpers in any camping situation.

My daughter, Molly, who's now 15, is the only reason several of my camps have been successful. She jumps in with both feet, gets stuff together and does what needs doing. Two years ago, I ended up with last-minute jury duty the day before leaving for a 3-day camp. I was afraid I might have to cancel it. I called Molly at noon and she biked to the office, organized and packed all the camping, cooking and paddling gear (canoes, PFD's, paddles, etc.), got all the "activity" stuff together, and then proceeded to buy and pack all of the food. She made it all look easy, but it was a job most adults would have had trouble accomplishing!

I really appreciate my supportive husband and three great kids. You might say that the Sense of Wonder Award is Timm family property!

Mary's achievements and personal life are definitely an inspiration to me. I hope you have gotten to know Mary better through this article, and that, when you get a chance, you'll congratulate her on a her award and a job well done. And the next time you need a creative jolt, remember that Mary's only as far away as a phone call or e-mail to Tetlin NWR.

Candace Ward is a Park Ranger at Kenai NWR.

What Scientists Really Mean

Jargon Translated for the Perplexed

It is believed . . .
I think . . .

It is generally believed . . .
A couple of other guys think so, too . . .

It is not unreasonable to assume . . .
If you believe this, you'll believe anything . . .

Of great theoretical importance . . .
I find it kind of interesting . . .

Of great practical importance . . .
I can get some mileage out of it . . .

Typical results are shown . . .
The best results are shown . . .

3 samples were chosen for further study.
The others didn't make sense, so we ignored them.

The 4-hour sample was not studied.
I accidentally dropped it on the floor.

The 4-hour determination may not be significant.
I dropped it on the floor, but scooped most of it up.

The significance of these results is unclear.
Look at the pretty artifact!

It has not been possible to provide definitive answers . . .
The experiment was negative, but at least I can publish the data somewhere.

Correct within an order of magnitude . . .
Wrong.

It might be argued that . . .
I have such a good answer for that objection that I shall now raise it!

Much additional work will be required . . .
This paper isn't very good, but neither are the others in this miserable field.

These investigations proved highly rewarding.
My grant is going to be renewed!

I thank X for assistance with the experiment and Y for useful discussions on the interpretation of the data.
X did the experiment and Y explained it to me.

Reprinted with permission from Jon Koomey's *Turning Numbers into Knowledge: Mastering the Art of Problem Solving*, p.80. More information at: (<http://www.numbersintoknowledge.com>)



UFSWS PHOTO

Mike Getman accepts the award from Representative Ogg while a gaggle of grateful Kodiak staffers look on.

Alaska State Legislature Awards Kodiak NWR

On December 3, 2003, Alaska State Representative Dan Ogg presented an award to the staff of Kodiak National Wildlife Refuge on behalf of the members of the Alaska State Legislature. The award, in the form of a plaque, reads:

“The members of the Twenty-third Alaska State Legislature honor the Kodiak National Wildlife Refuge in its Centennial year for its contribution to the Islands of Kodiak and Afognak, the State of Alaska and the United States of America.

The Year 2003 has been proclaimed the “Year of the National Wildlife Refuge” in celebration of the 100th year of the National Wildlife Refuge System. President Theodore Roosevelt designated Florida’s Pelican Island as the nation’s first bird sanctuary one hundred years ago, thus marking the official birth of the National Wildlife Refuge System. The Alaska National Wildlife Refuge Region has the distinction of accounting for nearly 85% of the

National Wildlife Refuge System’s almost 100 million acres.

The Kodiak National Wildlife Refuge is one of sixteen refuges around the state that comprise the Alaska National Wildlife Refuge Region. Each of the sixteen areas supports a diversity of fish and wildlife by providing habitat for natural systems to remain intact. The Kodiak Refuge encompasses about two-thirds of Kodiak Island and a portion of Afognak Island (50,000 acres) to the north. The Refuge contains hundreds of miles of coastline and tidal zones, 117 salmon streams, 14 major watersheds, and 11 large lakes.

President Franklin D. Roosevelt established the Kodiak Refuge in 1941 to protect the habitat of the brown bear. Besides the brown bear, mammals native to the islands include the red fox, river otter, short-tailed weasel, little brown bat, and tundra vole. The Kodiak Refuge is now home to some three thousand bears, at

least 500 pairs of bald eagles, 237 species of birds, and five species of Pacific salmon, as well as sea otters, sea lions and other marine mammals. Kodiak brown bears, among the largest of all bears, freely roam the Refuge and up to two million seabirds inhabit its bays, inlets, and shores.

The primary mission of the Kodiak National Wildlife Refuge is conservation of fish and wildlife populations and habitats. Educating and informing the public about wildlife and natural resources remain key goals of the Kodiak Refuge. Equally, the Refuge aims to provide the opportunity for continued subsistence use by local residents.

The members of the Twenty-third Alaska State Legislature join in celebrating the Centennial of the National Wildlife Refuge System and especially honor Kodiak National Wildlife Refuge for its contribution to the State of Alaska and the nearby communities.”

Real Field Work, Virtual Datasheets?

By TONY FISHBACH AND JOEL REYNOLDS

Most biologists agree: the best part of biology is the field work; the worst part is entering datasheets into the computer.

Data entry can be a huge time sink, and creates untold opportunities for errors during transcription. The problems are compounded on projects with long field seasons. In such cases, the delay in data entry can further reduce data integrity because questions about field records may not even arise until months after the fact. And, of course, the delay in data access also makes it impossible for observations to be analysed while the project and field gestalts are still fresh in the observer's mind.

But the times they are a'changin'. This past July the Kodiak National Wildlife Refuge started a four-month long brown bear behavioral study. In the "old" days this project would have been expected to produce more than 2000 datasheets, requiring at least 4 reams of Rite-in-the-Rain paper, several fistsfull of cramped fingers, and 12,000 lines of data entry. Instead, the principal observer, Wildlife Biologist Tony Fischbach, spearheaded a digital data collection process that increases data integrity, makes bio-tech training easier, and allows the rapid initiation of data analysis. In fact, Tony and the Regional Biometrician, Joel Reynolds, were able to design an analysis plan, complete data transfer and error checking, and begin the analysis on Joel's laptop... all while living in a Weather Port on a mountain above the field site (and continuing to collect observations). Who says data analysis can't be fun?

The digital data collection program was born in the spring of 2003, when Kodiak NWR contracted programmer Greg Putnam, of Anchorage based STMS, to devise a database for use on personal digital assistants (PDAs). Greg and Tony developed a



UFSWS PHOTO

Is your field staff this happy? Biologist Tracy Fischbach is smiling because committing her observations directly to a PDA-based database will save her and her co-workers months of data entry chores.

relational data management system using Pendragon and Access 2000 software. A Palm Zire 71 PDA, with an Otter Heavy Armor waterproof PDA case, was the tool of choice for the trial run.

In the field, observers tap the observations directly into the PDA while straddling the spotting scope tripod. The software presents a series of worksheets with context-specific entry options. Observers simply select the entry category they want to record and enter their data, eliminating the problem of different observers using different codes. The sequence of worksheets ensures that all components are completed during each observation event. Since data entry is almost wholly a process of selecting from menus using a handheld stylus, gloves and mittens are much less problematic than they can be when trying to complete more delicate tasks (such as using a pen or pencil!).

During breaks between observation events the field biologist can synchronize the PDA with a field laptop. When this is done, the database on the laptop conducts a series of automated error checks

on the new observations, flagging any questionable entries or missing data for immediate attention while the collection is still fresh in the observer's memory. The newly updated database is then automatically backed up to a Sandisk Cruzer, a small portable external data storage and transfer device. Automated graphs and tables allow field workers to immediately catch errors and examine trends.

At the recent Refuge Biologist Conference, much discussion focused on the need to increase efficiency and integrity of data management. The PDA-based data management system vastly improves field data integrity, and greatly reduces the delay between collection and delivery of project results to the Refuge Manager and the concerned public. To learn more about PDA-based data management check out the spring 2003 issue of the *Wildlife Society Bulletin* or contact the (justifiably proud) Kodiak National Wildlife Refuge biological staff.

Tony Fischbach is a Wildlife Biologist at Kodiak National Wildlife Refuge; Joel Reynolds is the Region 7 Refuge Biometrician.

Want More Technical Information?

Try these sites

Palm PDAs

<http://www.palmone.com/us/products/handhelds/>

Pendragon Software

<http://www.pendragonsoftware.com/>

Sandisk Cruzer

<http://www.sandisk.com/consumer/cruzer.asp>

Waterproof PDA cases

(one of many sources)
<http://www.thepocket.com/pocketpc/accessories/WATER.html>

Continued from page 1

fish cutting methods from Hanna Loon. Some of the students had cut fish in the past; and these more experienced workers assisted the novices. All the students were able to try their hands, and there was a lot of excitement when a camper successfully cut his or her "first ever" fish.

The students learned about whitefish anatomy, biology, and ecology from Fisheries Biologist Randy Brown. Randy has been conducting whitefish research in Alaska for several years, and was able to share a wealth of knowledge and interesting facts about these fascinating fish with the students.

In addition to these teaching duties, Randy spent the week catching and identifying various fish species, collecting tissue samples, weighing fish eggs, identifying fish parts, and explaining to the students how whitefish spawn and travel throughout the Selawik drainage.

When they weren't actually fishing, or working with fish, the students were able to watch the elders prepare traditional meals of boiled fish parts (and they ate lots of fish eggs for energy). Campers also picked berries, which were included in the celebratory feast held at the end of the



USFWS PHOTO

Smiles shared by adults and youngsters alike indicate that a terrific time was had by all.

week. The meal included a wonderful collection of traditional foods, and although the fish harvested during the camp were not, of course, ready to eat yet then, they were later distributed to camp participants and others in the village.

There's little doubt that the camp will be remembered as one of the highlights of the school year. The project organizers are already discussing future outdoor camps and activities that can encourage students to learn about both their cultural heritage and the science of wildlife and natural

resource management.

All in all, this endeavor shows what can be accomplished when the Service and its local partners work together to set and achieve common goals. Cooperation among a wide variety of groups is necessary to the huge jobs of fulfilling the mission of the Service and serving as worthy stewards of the natural resources entrusted to us by the American people.

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